

Amendments to the Specification

IN THE ABSTRACT OF THE DISCLOSURE

Attached hereto is a replacement Abstract with markings to show amendments.

IN THE WRITTEN DESCRIPTION

Please replace paragraph [0002] with the following amended paragraph:

[0002] Mechanical pulverization has been used in the past to manufacture a double oxide powder. This process involves mixing raw material powders, putting this mixture in a crucible or other such firing vessel and ~~heated~~heating at a high temperature for an extended time to bring about a solid phase reaction, and then pulverizing this product in a ball mill or the like. The double oxide powder manufactured by this method, however, is an agglomerate of particles with an irregular particle shape and a broad particle size distribution, and a considerable amount of impurities come from the crucible. Furthermore, the treatment is inefficient because it has to be carried out at a high temperature for a long time in order to raise the homogeneity of the composition. In addition, the particles are often modified on their surface by the mechanical impact and chemical ~~reaction~~reactions to which they are subjected during the pulverization process, which means that many defects develop at the surface and in the interior of the powder, thereby leading to the lowering of crystallinity and the deterioration of the physical properties inherent in the double oxide.

Please replace paragraph [0008] with the following amended paragraph:

[0008] It is an object of the present invention to manufacture a highly-crystallized double oxide powder that has no inclusion of impurities, is highly dispersible, is composed of a single crystal phase, and has a uniform particle size, by

a simple process at a low cost, and in particular to provide a manufacturing method suited to the manufacture of a functional metal double oxide powder, functional ceramic powder, or the like of which uniform composition and high crystallinity are required. It is another object of the present invention to provide a method with which a highly-crystallized double oxide powder that has a uniform particle size, ~~has~~ and a high purity, is highly dispersible, ~~and is~~ composed of a single crystal phase, can be obtained efficiently, in a single step, from a plurality of raw material compounds in the manufacture of a double oxide powder by the spray pyrolysis of a solution containing two or more metals or semi-metal elements, and which determines the ideal raw material solution composition for this purpose.

Please replace paragraph [0012] with the following amended paragraph:

[0012] 3. The method according to above item 1 or 2, wherein a plurality of compounds, each including at ~~least~~ least one metal element and/or at least one semi-metal element therein, is used as the raw material compound.

Please replace paragraph [0031] with the following amended paragraph:

[0031] The raw material compounds are dissolved in a solvent in specific proportions to prepare the raw material solution. The solvent can be water, an organic solvent such as an alcohol, acetone, or ether, or a mixture of these. Not all of the raw material compounds need to be completely dissolved as long as they are uniformly present in the droplets. For instance, the raw material compounds may be uniformly dispersed in the form of oxide ~~colloid~~ colloids in a solution in which the other compounds have been dissolved. The term "solution" as used in the present invention encompasses such a dispersion.

Please replace paragraph [0035] with the following amended paragraph:

[0035] The raw material solution is formed into fine droplets with an ultrasonic atomizer, a two-fluid nozzle type or other type atomizer, or using another such ~~atomizing~~atomizing means, then the droplets are heated and pyrolyzed at a high temperature. The heating step here may be the same as in an ordinary spray pyrolysis method. For example, the droplets are supplied at a constant flow rate along with a carrier gas into a vessel heated to a high temperature by an electric furnace or the like and passed through the vessel in a short time. In this heating step, the droplets may first be dried at a low temperature, then supplied to a high temperature area for pyrolysis. The composition usually tends to vary with a process such as this because the heating rate of the droplets is so slow, but the heating rate has no effect when the raw material solution of the present invention is used.

Please replace paragraph [0056] with the following amended paragraph:

[0056] With the present invention, a fine powder of various double oxides composed of a single crystal phase and having a uniform composition can be manufactured with ease. The obtained powder will contain few ~~inclusion~~inclusions of impurities, have a microscopically uniform composition, and have a high crystallinity, so the inherent functionality and physical properties of the double oxide can be fully realized. This is particularly favorable in the manufacture of phosphor materials, dielectric materials, magnetic materials, conductor materials, semiconductor materials, superconductor materials, piezo-electric materials, magnetic recording materials, secondary cell-use positive electrode materials, electromagnetic wave absorption materials, catalyst materials, and other such functional double oxides that require a uniform

composition as well as a uniform shape and particle size, high crystallinity and few crystal defects, a controlled crystal phase, and so forth. Of these, with rare earth ion activated phosphor materials, it used to be difficult to disperse activation ions to a high degree of uniformity, but the dispersion state of an activator will be extremely good in an oxide phosphor material obtained by the present method, with no segregation.